App. No. 10/501,053
Office Action Dated April 6, 2007

REMARKS

Favorable reconsideration is respectfully requested in view of the above amendments and following remarks. The specification has been amended to address formal issues. Proposed amendments to the drawings are submitted herewith to correct formal issues. Claims 11, 12 and 18 have been amended. The limitation in claims 11 and 18 concerning the human hepatoma-dervied growth factor 5 (HDGF5) polypeptide having an activity of proliferation of mouse endothelium cells is supported, for example by Example 6 in the specification. Claim 22 has been canceled without prejudice or disclaimer. Claims 11-13, 16-18 and 21 are pending.

Information Disclosure Statement

Applicants submit herewith an Information Disclosure Statement (IDS) including the following reference cited in the specification: Klagbrun et al., Human tumor cells synthesize an endothelial cell growth factor that is structurally related to basic fibroblast growth factor, *Proc. Natl. Acad. Sci.*, 83 pp. 2448-2452 (1986).

Sequence Compliance

Applicants submit herewith a response to the Notice to Comply With Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, indicating that a substitute paper and a substitute computer readable copy of the Sequence Listing in connection with the above-identified application, along with a Verification Under 37 C.F.R. § 1.82(f) of an Amendment inserting the substitute Sequence Listing into the application to address formal issues.

Applicants also hereby present proposed amended drawings to include Sequence Identifiers. With the proposed amendments, Applicants respectfully submit that the drawings are in proper form.

Applicants respectfully submit that with the above submissions, the specification is in compliance with the sequence rules under 37 CFR 1.821(a-d).

Withdrawal of the objection is respectfully requested.

Specification

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Applicants respectfully submit that the title as amended clearly is indicative of the invention to which the claims are directed.

Withdrawal of the objection is respectfully requested.

Claim rejections - 35 U.S.C. § 112

Claims 11-13, 16-18 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to claim the subject matter of the present invention. Claims 11 and 18 have been amended editorially, taking the issues in the rejection into account. Applicants respectfully submit that the claims are definite.

Withdrawal of the rejection is respectfully requested.

Claim rejections - 35 U.S.C. § 102

Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Tirado et al. (GenBank Acc. No. AY061636, 13 November 2001). The subject matter in previous claim 12 is now incorporated into claim 11, and therefore, the rejection is rendered moot. Applicants do not concede the correctness of the rejection.

Withdrawal of the rejection is respectfully requested.

Claim rejections - 35 U.S.C. § 103

Claims 11 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tirado et al. (GenBank Acc. No. Ay061636, 13 November 2001) in view of Sibson et al. (WO 94/01548). The subject matter in previous claim 12 is now incorporated into claims 11 and 18, and therefore, the rejection is rendered moot. Applicants do not concede the correctness of the rejection.

Applicants also respectfully note that the length of the encoded protein of AY061636 and the length of the encoded polypeptide of the present invention are different. Further, although Tirado teaches a protein member from the HDGF family, the protein member disclosed is from *Rattus norvegicus*, as opposed to human. Moreover, Tirado does not teach a HDGF5 polypeptide having activity of proliferation of mouse endothelium cells. Sibson does not cure the deficiencies of Tirado. Therefore, even if Tirado and Sibson are combined, the

references still fail to meet any of the claims. For at least these reasons, claims 11 and 16-18 are patentable over Triado in view of Sibson.

Withdrawal of the rejection is respectfully requested.

In view of the above, favorable reconsideration in the form of a notice of allowance is respectfully requested. Any questions regarding this communication can be directed to the undersigned attorney, Rong Yang, Limited Recognition No. L0279, at (612) 455-3816.

Respectfully submitted,

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Dated: October 9, 2007

By: _____
Rong Yang
Limited Recognition No. L0279

CY:YM

Inventor: Long Y
Docket No.: 0954...62USWO
Title: POLYNUCLEOTIDE, VECTOR, HOST CELL AND METHOD FOR PRODUCING HUMAN HEPATOMA-DERIVED GROWTH FACTOR 5 POLYPEPTIDE (Amended)
Attorney Name: Michael D. Schumann
Phone No 612 455 3803
Sheet 1 of 1 ANNOTATED SHEET

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human HDGF5 MSCFSRPK-YKTGDLVFAKLKGYAHWPARIEHVTEP-------NRYQVFFFGTHETAFLGP 53
rat HRP     MSCFSRPK-YKTGDLVFAKLKGYAHWPARIEHVTEP-------NRYQVFFFGTHETALLGP 53
mouse HRP1  MSCFSRSK-YKTGDLVFAKLKGYAHWPARIEHVAEA-------NRYQVFFFGTHETALLGP 53
mouse HDGF  MSRSNRQKEYKCGDLVFAKMKGYPHWPARIDEMPEAAVKSTANKYQVFFFGTHETAFLGP 60
rat HDGF    MSRSNRQKEYKCGDLVFAKMKGYPHWPARIDEMPEAAVKSTANKYQVFFFGTHETAFLGP 60
human HDGF  MSRSNRQKEYKCGDLVFAKMKGYPHWPARIDEMPEAAVKSTANKYQVFFFGTHETAFLGP 60
human HRP1  MSRSNRQKEYKCGDLVFAKMKGYPHWPARIDEMPEAAVKSTANKYQVFFFGTHETAFLGP 60
human HRP3  -MARPRPREYKAGDLVFAKMKGYPHWPARIDELPEGAVKPPANKYPIFFFGTHETAFLGP 59
mouse HRP3  -MARPRPREYKAGDLVFAKMKGYPHWPARIDELPEGAVKPPANKYPIFFFGTHETAFLGP 59
mouse HRP2  ------MPHAFKPGDLVFAKMKGYPHWPARIDDIADGAVKPPPNKYPIFFFGTHETAFLGP 55
rat HDGF3   ------MPHAFKPGDLVFAKMKGYPHWPARIDDIADGAVKPPPNKYPIFFFGTHETAFLGP 55
                     : :* *******:***. ******:. :. :       *:* :*********:***

human HDGF5 KHLFPYEESKERFGKPNKRRGFSEGLWEIEHDPMAEASPCLCPDEEQLCAEEPGPGEEPE 113 (SEQ ID NO:2)
rat HRP     KHLFPYEESKERFGKPNKRRGFSEGLWEIEHDPMVEASPCLCPDEEQLCAEEPGPGEEPE 113 (SEQ ID NO:9)
mouse HRP1  RHLFPYEESKEKFGKPNKRRGFSEGLWEIEHDPMVEASSSLCSEEDQSYTEDPGLAEEPE 113 (SEQ ID NO:10)
mouse HDGF  KDLFPYEESKEKFGKPNKRKGFSEGLWEIENNPTVKASGYQSS-QKKSCAAEP------- 112 (SEQ ID NO:11)
rat HDGF    KDLFPYEESKEKFGKPNKRKGFSEGLWEIENNPTVKASGYQSS-QKKSCAEEP------- 112 (SEQ ID NO:12)
human HDGF  KDLFPYEESKEKFGKPNKRKGFSEGLWEIENNPTVKASGYQSS-QKKSCVEEP------- 112 (SEQ ID NO:13)
human HRP1  KDLFPYEESKEKFGKPNKRKGFSEGLWEIENNPTVKASGYQSS-QKKSCVEEP-------- 112 (SEQ ID NO:14)
human HRP3  KDLFPYKEYKDKFGKSNKRKGFNEGLWEIENNPGVKFTGYQAIQQQSSSETEGEGGNTAD 119 (SEQ ID NO:15)
mouse HRP3  KDLFPYKEYKDKFGKSNKRKGFNEGLWEIENNPGVKFTGYQTIQQQSSSETEGEGGNTAD 119 (SEQ ID NO:16)
mouse HRP2  KDLFPYDKCKDKYGKPNKRKGFNEGLWEIQNNPHASYSAPPPVSSSDSEAPEADLGCGSD 115 (SEQ ID NO:17)
rat HDGF3   KDLFPYDKCKDKYGKPNKRKGFNEGLWEIQNNPHASYSAPLPVSSSDSEAPEADLGGGSD 115 (SEQ ID NO:18)
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Fig. 1